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DIRECTOR OFFICE
TECHNOLOGY CENTER 2600

In re Application of
Michael D. Ellis, et al.
Application No. 10/645,928
Filed: August 20, 2003
For: ENHANCED RADIO SYSTEMS AND
METHODS

DECISION ON PETITION
TO MAKE SPECIAL

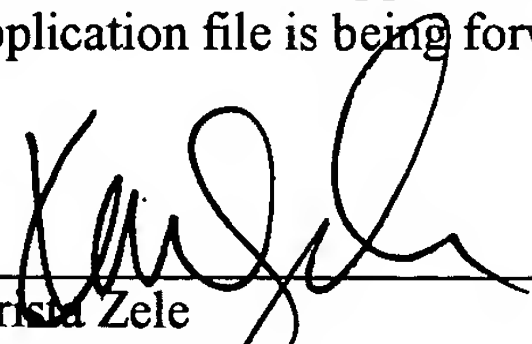
This is a decision on the petition filed August 27, 2004 under Manual of Patent Examination Procedure §708.02, VIII requesting accelerated examination.

The petition under Manual of Patent Examination Procedure §708.02, VIII, must:

- (1) be filed prior to receiving any examination by the examiner,
- (2) be accompanied by the required fee- \$130,
- (3) the claims should be directed to a single invention (if it is determined that the claims pertain to more than one invention, then applicant will have to make an election without traverse or forfeit accelerated examination status),
- (4) state that a pre-examination search was made, and fully discuss the search method employed, such as classes and subclasses searched, publications, Chemical abstracts, patents, etc. A search made by a foreign patent office satisfies this requirement,
- (5) be accompanied by a copy of each of the references most closely related to the subject matter encompassed by the claims if said references are not already of record,
- (6) fully discuss the references, pointing out with the particularity required by 37 C.F.R. §1.111 (b) and (c), how the claimed subject matter is patentable over the references.

The petitioner meets all the above-listed requirements. Accordingly, the petition is **GRANTED**.

The application will retain its special status throughout its entire prosecution, including any appeal to the Board of Patent Appeals and Interferences, subject only to diligent prosecution by the applicant. The application file is being forwarded to the examiner for appropriate action in due course.


Krista Zele
Special Program Examiner
Technology Center 2600
Communications

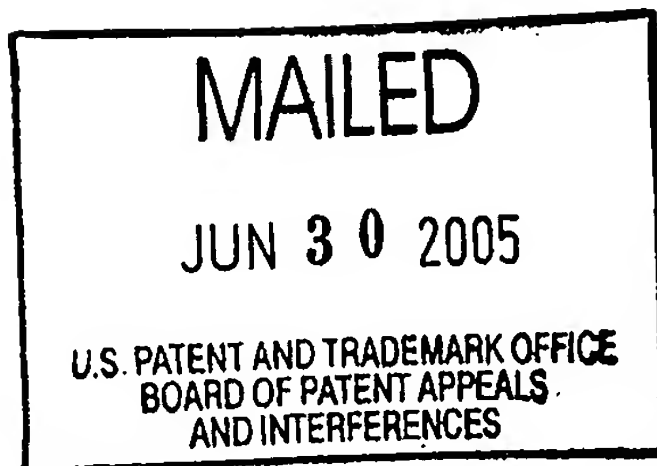
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The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES



Ex parte JIM RASMUSSEN

Appeal No. 2005-1176
Application No. 09/320,659

ON BRIEF

Before HAIRSTON, BARRETT, and RUGGIERO, Administrative Patent Judges.
HAIRSTON, Administrative Patent Judge.

DECISION ON APPEAL

This is an appeal from the final rejection of claims 1 through 28.

The disclosed invention relates to an adaptation enhancement processor that outputs a training signal for an adaptive filter portion of a signal processing device.

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A signal processing device, comprising:

an adaptive filter configured to filter an input signal and to thereby provide a filtered output signal, wherein a filtering characteristic of said adaptive filter is dynamically adjusted based upon the filtered output signal and upon a training signal; and

an adaptation enhancement processor combining an adaptation-enhancing signal with a reference signal to provide the training signal to said adaptive filter, the adaptation-enhancing signal being dynamically adjusted based upon the reference signal.

The references relied on by the examiner are:

Guidoux	4,621,173	Nov. 4, 1986
Kawahara et al. (Kawahara)	5,859,907	Jan. 12, 1999

Claims 1 through 8, 10 through 16, 18 through 25, 27 and 28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Kawahara.

Claims 9, 17 and 26 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the admitted prior art in view of Kawahara and Guidoux.

Reference is made to the briefs (paper numbers 11 and 13) and the answer (paper number 12) for the respective positions of the appellant and the examiner.

OPINION

We have carefully considered the entire record before us, and we will reverse the obviousness rejections of claims 1 through 28.

The examiner states (answer, page 4) that the acknowledged prior art (specification, page 2) "meets all elements of Claim 1 with the exception of an adaptation enhancement processor combining an adaptation enhancing signal with a reference signal to provide the training signal to said adaptive filter, the adaptive enhancing signal being dynamically adjusted based upon the reference signal." According to the examiner (answer, pages 4 and 5):

Kawahara discloses a level/frequency characteristic measuring unit (Fig. 4, reference 12; column 7, lines 18-22) that corresponds to the adaptation enhancement processor claimed and combines a filtered pseudonoise signal that corresponds to the adaptation enhancing signal claimed from a pseudo noise generator (Fig. 4, reference 11, 13; column 7, lines 15-18) with a far end talker's voice (column 7, lines 61-64) that corresponds to the reference signal claimed to produce a far-end voice output signal (Fig. 4; reference Rout) that corresponds to the training signal claimed.

Based upon the teachings of Kawahara, the examiner concludes (answer, page 5) that "[i]t would have been obvious to one skilled in the art at the time of the invention to apply adaptation enhancement as taught by Kawahara to the prior art device disclosed by applicant for the purpose of estimating an echo path without depending on the far-end talker's voice."

Appellant argues inter alia (brief, page 10) that "the far-end talker's voice referred to in Kawahara cannot correspond to the claimed reference signal."

We agree with the appellant's argument. As indicated supra, claim 1 requires that the training signal that will be provided to the adaptive filter be produced by "combining an adaptation-enhancing signal with a reference signal." Although the far-end voice output Rout from adder 14 is influenced by the outputs from both the pseudo noise generator 11 and the variable filter 13, the far-end voice output Rout is only used by the echo replica generator 16 to derive an echo replica. The adder 17 combines the echo replica with the near-end voice input Sin to create a near-end voice output Sout. Thus, the near-end voice output Sout, as opposed to the far-end voice output Rout, serves as a training signal. In summary, the obviousness rejection of claim 1, and the claims that depend therefrom (i.e.,

claims 2 through 8, 10 and 11), is reversed because the far-end voice output signal Rout is used to form a echo replica signal, and not a training signal.

Turning to claims 12 and 20, we agree with the appellant's arguments (brief, pages 10 through 12) that the applied prior art neither teaches nor would have suggested to one of ordinary skill in the art that the adaptation-enhancing signal is influenced by a "frequency mask of the far-end audio signal" (claim 12) or that the adaptation-enhancing signal is computed based on a "frequency mask of the reference signal" (claim 20). Consequently, the obviousness rejection of claims 12 and 20, and the claims that depend therefrom (i.e., claims 13 through 16, 18, 19, 21 through 25, 27 and 28), is reversed.

The obviousness rejection of claims 9, 17 and 26 is reversed because the teachings of Guidoux do not cure the noted shortcomings in the teachings of the admitted prior art and Kawahara.

The decision of the examiner rejecting claims 1 through 28 under 35 U.S.C.

REVERSED

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Appeal No. 2005-1176
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Page 6

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